

Claims

1. Apparatus for generating three-dimensional text within images composited in real time, comprising means for generating said three-dimensional text from one or a plurality of text formatting templates, including processing means and storage means, wherein

said storage means stores said text formatting templates and instructions for said processing means;

said instructions configure said processing means to perform the steps of:

defining one of said text formatting templates as a two-dimensional template equipped with cartesian co-ordinates within a three-dimensional space;

equipping said defined text formatting template with three-dimensional preferences with which to format text to be included in said template;

equipping said defined text formatting template with said text; and

rendering said two-dimensional template including said text formatted according to said three-dimensional preferences within said three-dimensional space.

2. Apparatus according to claim 1, wherein said one or a plurality of text formatting templates is a two-dimensional plane delimited by two sets of two parallel segments of an identical length, the respective extremities of the segments of the first set intersecting the respective extremities of the segments of the second set at a right angle.

3. Apparatus according to claims 1 and 2, wherein said defining step of one of said text formatting templates as a two-dimensional template equipped with cartesian co-ordinates within a three-dimensional space comprises either a two-dimensional rotation, or a three-dimensional rotation, or a scaling operation or any combination thereof.

4. Apparatus according to claim 3, wherein said two-dimensional rotation, three-dimensional rotation and scaling operation are implemented either by motion input or alphanumerical input or any combination thereof.

5. Apparatus according to claim 1, wherein said three-dimensional preferences with which to format text to be included in said template comprises either an extrusion depth, or one or a plurality of textures with which to equip said text, or one or a plurality of light sources with which to light said text, or any combination thereof.

6. Apparatus according to claim 5, wherein said extrusion depth, one or a plurality of textures with which to equip said text and one or a plurality of light sources with which to light said text are implemented either by motion input or alphanumerical input or any combination thereof.

7. Apparatus according to claim 1, wherein said text is one or a plurality of ASCII characters equipped with a font and font size, every outline of which is subsequently divided into a number of vertices, such that said every outline is divided into a number of segments that are tessellated into a number of polygons, with said number of polygons depending upon the final

rendering resolution.

8. Apparatus according to claim 1, wherein said text equipping
said defined text formatting template is alphanumerical data inputted either
5 by means of physical input means or by means of a data source linked to
said text formatting template.

9. Apparatus according to claim 1, wherein said equipping step
of said defined text formatting template with said text is performed in real
10 time.

10. Apparatus according to claim 1, wherein said rendering step
of said two-dimensional template including said text formatted according to
said three-dimensional preferences within said three-dimensional space is
15 performed in real time.

11. A method of generating three-dimensional text within images
composited in real time, comprising means for generating said three-
dimensional text from one or a plurality of text formatting templates,
20 including processing means and storage means, wherein

said storage means stores said text formatting templates and
instructions for said processing means;

said instructions configure said processing means to perform the
steps of:

25 defining one of said text formatting templates as a two-dimensional
template equipped with cartesian co-ordinates within a three-dimensional

space;

equipping said defined text formatting template with three-dimensional preferences with which to format text to be included in said template;

5 equipping said defined text formatting template with said text; and
 rendering said two-dimensional template including said text formatted according to said three-dimensional preferences within said three-dimensional space.

10 **12.** A method according to claim **11**, wherein said one or a plurality of text formatting templates is a two-dimensional plane delimited by two sets of two parallel segments of an identical length, the respective extremities of the segments of the first set intersecting the respective extremities of the segments of the second set at a right angle.

15 **13.** A method according to claims **11** and **12**, wherein said defining step of one of said text formatting templates as a two-dimensional template equipped with cartesian co-ordinates within a three-dimensional space comprises either a two-dimensional rotation, or a three-dimensional
20 rotation, or a scaling operation or any combination thereof.

14. A method according to claim **13**, wherein said two-dimensional rotation, three-dimensional rotation and scaling operation are implemented either by motion input or alphanumerical input or any
25 combination thereof.

15. A method according to claim 11, wherein said three-dimensional preferences with which to format text to be included in said template comprises either an extrusion depth, or one or a plurality of textures with which to equip said text, or one or a plurality of light sources
5 with which to light said text, or any combination thereof.

16. A method according to claim 15, wherein said extrusion depth, one or a plurality of textures with which to equip said text and one or a plurality of light sources with which to light said text are implemented
10 either by motion input or alphanumerical input or any combination thereof.

17. A method according to claim 11, wherein said text is one or a plurality of ASCII characters equipped with a font and font size, every outline of which is subsequently divided into a number of vertices, such that said
15 every outline is divided into a number of segments that are tessellated into a number of polygons, with said number of polygons depending upon the final rendering resolution.

18. A method according to claim 11, wherein said text equipping
20 said defined text formatting template is alphanumerical data inputted either by means of physical input means or by means of a data source linked to said text formatting template.

19. A method according to claim 11, wherein said equipping step
25 of said defined text formatting template with said text is performed in real time.

20. A method according to claim **11**, wherein said rendering step of said two-dimensional template including said text formatted according to said three-dimensional preferences within said three-dimensional space is performed in real time.

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21. A computer-readable medium having computer-readable instructions executable by a computer such that, when executing said instructions, a computer will perform the steps of

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defining a text formatting template as a two-dimensional template equipped with cartesian co-ordinates within a three-dimensional space;

equipping said defined text formatting template with three-dimensional preferences with which to format text to be included in said template;

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equipping said defined text formatting template with said text; and rendering said two-dimensional template including said text formatted according to said three-dimensional preferences within said three-dimensional space.

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22. A computer-readable memory system having computer-readable data stored therein, comprising

one or a plurality of textures;

one or a plurality of object meshes;

an objects database;

one or a plurality of 3D text templates; and

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a 3D text application with which to define, configure and render said 3D text templates.

23. A computer-readable memory system according to claim **22**, wherein said program instructions are configured to;

define a text formatting templates as a two-dimensional template equipped with cartesian co-ordinates within a three-dimensional space;

5 equip said defined text formatting template with three-dimensional preferences with which to format text to be included in said template;

equip said defined text formatting template with said text; and

10 render said two-dimensional template including said text formatted according to said three-dimensional preferences within said three-dimensional space.